

## OIB - DC-8 11/11/14 Science Report

**Aircraft:**

[DC-8](#) ([See full schedule](#))

**Date:**

Tuesday, November 11, 2014

**Mission:**

OIB

**Mission Location:**

Antarctica

**Mission Summary:**

### F16 Getz Ice Shelf A

**Accomplishments**

- Low-altitude survey (1,500 ft AGL) over the Getz Ice Shelf and upper catchments of Smith and Kohler Glaciers.
- ATM, albedo, KT-19, snow, Ku-band, MCoRDS, gravimeter, and DMS were operated on the survey lines.
- Collected additional high altitude data on transits to and from the survey area.
- Ramp pass at Punta Arenas airport after takeoff at 2,000 ft AGL (slightly left of target, but usable data).
- Elevation maneuvers (a.k.a. pitch maneuvers) over Pine Island Bay for snow and Ku-band radar validation.
- Satellite tracks: none.
- Repeat Mission: portions in 2010 and 2012.

Instrument	Operated	Data Volume	Instrument Issues/Comments
ATM	yes	36 GB	None.
CAMBOT	yes	57 GB	None.
DMS	yes	64 GB	None.
Snow Radar	yes	356 GB	None.
Ku-band Radar	yes	356 GB	None.
MCoRDS	yes	0.9 TB	19 min data gap in turn between survey lines due to software failure.
KT-19	yes	10 MB	None.
Albedo	yes	2.9 GB	None.
Albedo camera	yes	377 MB	None.
Gravimeter	yes	2.0 GB	Warning message during takeoff run. Data assumed to be good.

**Mission Report (Michael Studinger, Mission Scientist)**

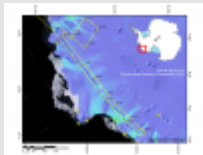
Today's flight is a new mission plan, designed in parallel with the Getz B mission to collect  $dh/dt$  measurements over the Getz Ice Shelf and grounded ice just inland. This flight overflies IceBridge lines flown in 2010 (the outboard line) and 2012 (the inland line). In addition, this mission captures two new lines over the upper catchment of Smith and Kohler Glaciers, spaced at 80 km apart. This spacing drops to 40 km if both Getz A and Getz B are flown.

We had 3 target areas with high priority that had a reasonably good weather forecast. Getz A was by far the safest bet. Other than a patch of low clouds during a turn between survey lines we encountered no issues on today's flight. Occasional light to moderate turbulence in the area.

LiDAR data collection started 11/11/2014 15:21 UTC and ended at 19:30 UTC. In total we collected 4.2 hours of LiDAR data.

**Images:**

**Figure 1: Today's trajectory in yellow.**



[Read more](#)

**Submitted by:**

Michael Studinger on 11/11/14

**Related Flight Report:**

## DC-8 11/11/14

**Flight Number:**

150123

**Payload Configuration:**

Operation IceBridge 2014

**Nav Data Collected:**

Yes

**Total Flight Time:**

11.2 hours

**Submitted by:**

Chris Jennison on 11/13/14

**Flight Segments:**

<b>From:</b>	SCCI	<b>To:</b>	SCCI
<b>Start:</b>	11/11/14 11:59 Z	<b>Finish:</b>	11/11/14 23:11 Z
<b>Flight Time:</b>	11.2 hours		
<b>Log Number:</b>	<a href="#">158003</a>	<b>PI:</b>	Michael Studinger
<b>Funding Source:</b>	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
<b>Purpose of Flight:</b>	Science		
<b>Comments:</b>	Airfield pass over SCCI at 2000 ft. for ATM. Two parallel lines over Toney Mountain. Two transects along Gets and Hobbs Coast, one inland a few hundred meters and the second along the charted shoreline. All instruments recorded data. ATM LIDAR recorded 36 Gb of data, Cambot 57 Mb, ZenithCam 370 Mb, Albedo 2.9 Mb MCoRDS 959 Gb recorded DMS recorded 63.6 Gb Gravimeter 2 Gb Snow & Ku radar 356 Gb/ea. Flight was yet again uneventful.		

**Flight Hour Summary:**

	<b>158003</b>
<b>Flight Hours Approved in SOFRS</b>	300
<b>Total Used</b>	292.1
<b>Total Remaining</b>	7.9

**158003 Flight Reports**

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
<a href="#">10/06/14</a>	150101	Science	1.2	1.2	298.8
<a href="#">10/07/14 - 10/08/14</a>	150102	Science	5.2	6.4	293.6
<a href="#">10/08/14</a>	150103	Science	3.7	10.1	289.9
<a href="#">10/13/14</a>	150104	Transit	10.4	20.5	279.5
<a href="#">10/13/14</a>	150105	Transit	3.2	23.7	276.3
<a href="#">10/16/14</a>	150106	Science	11	34.7	265.3
<a href="#">10/18/14 - 10/19/14</a>	150107	Science	11.9	46.6	253.4
<a href="#">10/20/14</a>	150108	Science	11.7	58.3	241.7

<a href="#">10/23/14</a>	150109	Science	11.8	70.1	229.9
<a href="#">10/25/14</a>	150110	Science	11.4	81.5	218.5
<a href="#">10/26/14 - 10/27/14</a>	150111	Science	11.9	93.4	206.6
<a href="#">10/28/14</a>	150112	Science	11.5	104.9	195.1
<a href="#">10/29/14</a>	150113	Science	10.9	115.8	184.2
<a href="#">10/31/14</a>	150114	Maintenance	2.8	118.6	181.4
<a href="#">11/01/14</a>	150115	Maintenance	3	121.6	178.4
<a href="#">11/02/14</a>	150116	Science	10.9	132.5	167.5
<a href="#">11/03/14</a>	150117	Science	11.1	143.6	156.4
<a href="#">11/05/14</a>	150118	Science	11.4	155	145
<a href="#">11/06/14</a>	150119	Science	11.1	166.1	133.9
<a href="#">11/07/14</a>	150120	Science	10.9	177	123
<a href="#">11/08/14</a>	150121	Science	11.4	188.4	111.6
<a href="#">11/10/14</a>	150122	Science	11.2	199.6	100.4
<a href="#">11/11/14</a>	150123	Science	11.2	210.8	89.2
<a href="#">11/13/14</a>	150124	Science	11.4	222.2	77.8
<a href="#">11/14/14</a>	150125	Science	11.5	233.7	66.3
<a href="#">11/15/14</a>	150126	Science	11.2	244.9	55.1
<a href="#">11/16/14</a>	150127	Science	11.1	256	44
<a href="#">11/21/14</a>	150128	Science	11.2	267.2	32.8
<a href="#">11/22/14</a>	150129	Science	10.8	278	22
<a href="#">11/24/14</a>	150130	Transit	2.9	280.9	19.1
<a href="#">11/25/14 - 11/26/14</a>	150131	Transit	11.2	292.1	7.9

*Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.*

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